

# **Summer 2002 Electric Supply & New Generation**

**Forecasted Peak/Worst Case Peak  
& Reserve Margin**

**Accuracy of Previous Peak Forecasts for  
Summers of 1997 - 2002**

**Illinois Commerce Commission  
Electric Policy Committee Meeting  
May 8, 2002**

## **Foreword**

The attached two exhibits were prepared for the May 8, 2002 Electric Policy Committee Meeting of the Illinois Commerce Commission considering the adequacy of Illinois electric utilities' supply for Summer - 2002. This information was in large measure provided to the Commission by five of the major Illinois electric utilities.

Exhibit 1 provides the forecasted peak demand, reserve margin based on the forecasted peak and worst case peak demand as estimated by each utility.

Exhibit 2 compares the forecasted peak and actual peak demand of prior summers by each utility.

Illinois Commerce Commission  
May 8, 2002

**Exhibit 1: Forecasted Peak/Worst Case Peak  
& Reserve Margin for Summer 2002**

Utility	Forecasted Peak	Reserve Margin	Worse Case Peak
Ameren	CIPS: 3,028MW <sup>1</sup>	AEM: 29% OR 869MW <sup>3</sup>	CIPS: 3,228MW <sup>5</sup>
	UE-III: 600MW <sup>2</sup>	UE: 17% OR 1,384MW <sup>4</sup>	UE-III: 728MW <sup>6</sup>
CILCO	1,228MW	20% OR 232MW	1,294MW <sup>7</sup>
ComEd	21,900MW <sup>8</sup>	19+ <sup>9</sup> OR 4,100+MW	23,100MW <sup>10</sup>
Illinois Power	3,358MW <sup>11</sup>	19% OR 617MW	3,598MW <sup>12</sup>
MidAmerican	3,924MW <sup>13</sup>	20% OR 784MW	4,302MW <sup>14</sup>

<sup>1</sup> This figure does not include interruptible load.

<sup>2</sup> This figure represents the forecasted peak load for the Illinois territory of AmerenUE. This figure does not include interruptible load.

<sup>3</sup> This figure represents the reserve margin for Ameren Energy Marketing.

<sup>4</sup> This figure represents the reserve margin for all of AmerenUE -- AmerenUE was unable to breakout its data to reflect only the Illinois territories in AmerenUE.

<sup>5</sup> AmerenCIPS' worse case peak for the summer of 2002 is based upon risk analysis using Monte Carlo simulations. Using historical hourly loads and hourly temperatures, the utility generated 1,000 forecasts for each month's peak.

<sup>6</sup> This figure represents the expected worse case scenario load for the Illinois territory of AmerenUE. The worse case peak for the AmerenUE summer of 2002 scenario is based upon the 95% percentile peak demand for the last 5 years.

<sup>7</sup> The worse case summer 2002 expected peak load is based on a scenario approach using actual weather that occurred for each year from 1970-2001, resulting in 30 alternative scenarios. The largest monthly peak value from these scenarios was determined to be the "worse case" peak. The worse case peak fell in the month of August and was simulated using the hottest weather from the last 30 years.

<sup>8</sup> The expected 2002 summer peak load is based on "normal weather" conditions. Because of the uncertainty of actual weather conditions, the expected peak is set at a level that has a 50 percent chance of exceeding that value and a 50 percent chance of being less than that value, based on actual weather conditions.

<sup>9</sup> Includes curtailment programs.

<sup>10</sup> The worse case summer 2002 ComEd peak load is based on extreme weather conditions that can occur once in five years. This is a departure from last years criteria of once in ten years.

<sup>11</sup> IP's expected forecast is based upon normal/average weather patterns.

<sup>12</sup> IP's "worse-case" scenario is based upon the possibility of the highest temperature experienced on a peak day within the past 20 years reoccurring this summer.

<sup>13</sup> The expected 2002 MidAmerican summer peak load is based on normal weather conditions and is the net peak load after load reductions due to direct load control and interruptible loads.

<sup>14</sup> The worse case summer MidAmerican 2002-peak load is based on "extreme weather" conditions and is the net peak load after load reductions due to direct load control and interruptible loads. The extreme weather scenario was developed using weather conditions that occur only 5% of the time (once in 20 years).

**Exhibit 2: Accuracy of Previous Peak Forecasts for  
the Summers of 1997 - 2001**

Utility	Year	Forecasted Peak	Actual Peak	MW and Percent Above/(Below) Forecast
Ameren <sup>15</sup> (Ameren Energy Marketing)	1997	1,905MW	1,831MW	(74MW or 3.88 %)
	1998	1,966MW	1,969MW	3MW or 0.15%
	1999	1,930MW	2,034MW	104MW or 5.39%
	2000	1,960MW	1,987MW	27MW or 1.38%
	2001	2,873MW	3,008MW	135MW or 4.70%
CILCO	1997	1,198MW	1,135MW	(63MW or 5.26%)
	1998	1,216MW	1,195MW	(21MW or 1.73%)
	1999	1,228MW	1,235MW	7MW or 0.57
	2000	1,243MW	1,285MW	42MW or 3.38%
	2001	1,294MW	1,287MW	(7MW or 0.54%)
ComEd	1997	19,600MW	18,647MW	(953MW or 4.86%)
	1998	19,900MW	19,740MW	(160MW or 0.80%)
	1999	20,100MW	22,068MW	1,968MW or 9.79%
	2000	20,700MW	20,143MW	(557MW or 2.69%)
	2001	21,870MW	21,574MW	(296MW or 1.35%)
Illinois Power	1997	3,473MW	3,489MW	16MW or 0.46%
	1998	3,405MW	3,665MW	260MW or 7.64%
	1999	3,657MW	3,888MW	231MW or 6.32%
	2000	3,703MW	3,473MW	(230 MW or 6.21%)
	2001	3,497MW	3,475MW	(22MW or 0.63%)
MidAmerican	1997	3,464MW	3,548MW	84MW or 2.42%
	1998	3,698MW <sup>16</sup>	3,643MW	(5MW or 1.49%)
	1999	3,604MW	3,833MW	229MW or 6.35%
	2000	3,804MW	3,648MW	(156MW or 4.1%)
	2001	4,110MW	3,935MW	(175MW or 4.26%)

<sup>15</sup> The figures for Forecasted and Actual Peaks for the Summers of 1997-2000 are for AmerenCIPS only while the figures for 2001 are for Ameren Energy Marketing . AmerenUE-Illinois information is not reported separately from the AmerenUE totals as described above and therefore that information is not shown here.

<sup>16</sup> This figure represents the hot-weather peak forecast based on the expected impact of El Nino. The normal-weather peak forecast was 3,561MW, the difference between this figure and the actual peak was +82MW or +2.3%.